

Environmental Statement 2023

CNOOC Petroleum Europe Limited



Foreward

At CNOOC Petroleum Europe Limited (CNOOC), we are committed to minimising our environmental impact through the delivery of safe and sustainable operations.

To demonstrate our commitment in action, this Environmental Statement includes:

- A description of our UK operated assets and activities carried out in 2023.
- A summary of our Environmental Management System.
- Environmental emissions and discharges figures for 2023.
- Our environmental objectives.

Throughout 2023, we continued to focus on activities that minimise our impact on the environment. These included:

- Making operational improvements which resulted in a 21% reduction on Scope 1 GHG emissions compared to 2018 levels.
- Reviewing and updating our asset Emission Reduction Asset Plans (ERAPs) to version 2.0.
- Six Environmental Reps completed their NEBOSH Environmental Awareness course, resulting in a total of 17 people within CNOOC attaining this qualification.

I hope you find this Environmental Statement informative and see the results of our continued progress to deliver safe and sustainable energy.



Mr. Pan Yiyong
Managing Director, CNOOC UK



We are committed to delivering on the North Sea Transition Deal targets and becoming a net zero energy business in the UK by 2050.

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Introduction

CNOOC Petroleum Europe Limited is a wholly owned subsidiary of CNOOC International, the international division of CNOOC Limited. The CNOOC Group is the largest producer of offshore crude oil and natural gas in China and one of the largest independent oil and gas exploration and production companies in the world. The Group mainly engages in exploration, development, production and sale of crude oil and natural gas.

CNOOC is a leading upstream business in the UK North Sea and operator of the Buzzard, Golden Eagle, and Scott assets. Our strategy is to maximise the value of our UK portfolio and create new opportunities for safe and sustainable growth. We are committed to delivering on the North Sea Transition Deal emissions reduction targets and being a Net Zero energy business in the UK by 2050.

This statement refers to CNOOC's UK operations only.

Environmental Management System

CNOOC's Environmental Management System (EMS) is aligned with requirements of ISO 14001:2015. The EMS is independently verified in line with the requirements of the Oslo/Paris Convention (OSPAR) Recommendation 2003/5, to promote the use and implementation of Environmental Management Systems on the UKCS.

An OSPAR verification opinion statement with zero comments was reported to the Offshore Petroleum Regulator for Environment & Decommissioning (OPRED) in April 2023. The next EMS OSPAR verification is scheduled for April 2025.

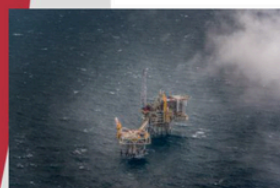
Environment Representatives (E-Reps)

CNOOC's E-Reps continue to provide valuable support to offshore workforce engagement activities including:

- Roll out of procedures and environmental initiatives.
- Reduction of waste, including the 'Zero Waste to Landfill' initiative.
- Spill reduction, OPEP awareness drills, and environmental hazard identification programmes.
- Area inspections.
- Supporting environmental audits and inspections.
- Identification and trialing of new environmental training options.

Health, safety, environment & social responsibility

The policy shown below details the beliefs, values, and principles governing the management of health, safety, environment & social responsibility within CNOOC.



Our commitment to

Health, Environment, Safety & Social Responsibility

This Policy Commitment underpins the requirements outlined in the Corporate Policy Framework and applies to all activities carried out by and under the control of CNOOC Petroleum Europe Limited, its branches and subsidiaries (CPEL).

Within CPEL, the Board of Directors owns and takes responsibility for our overall HSE&SR performance working with our executive leadership and functional teams. We believe that management and staff commitment to HSE&SR is essential to ensuring a healthy, safe and environmentally acceptable operating environment.

We see our people are our most important asset and we will not compromise our HSE&SR standards to achieve other corporate goals, in so far as it is reasonably practicable. As such, we value the experience, professionalism and integrity of our workforce, and the commitment, leadership and accountability of all personnel for our HSE&SR performance.

We integrate HSE&SR planning and management into our day-to-day activities, defining individual responsibilities, authority and accountability. By providing adequate control of HS&E risks arising from our work activities, we strive to prevent accidents, injuries and cases of work related ill health, damage to equipment and the environment.

We meet all applicable regulatory requirements, as well as other compliance requirements to which we subscribe, and strive to deliver continuous improvement in our HSE&SR performance.

Occupational Health and Personal Safety

CPEL consult with our people on matters affecting their health and safety working conditions, plant and equipment, and provide appropriate HSE&SR information, instruction, training and supervision to employees and contractors.

We strive to optimise the safety of all our worksites by contracting those contractors who can demonstrate that they have suitable HS&E performance and management systems in place. In addition, we ensure that emergency response capability is in place and periodically test for all our operations and facilities.

We ensure all workers are competent to carry out their tasks, in so far as they can impact on the

health and safety of themselves and those around them, or the environment.

CPEL maintains safe and healthy working conditions, by providing and maintaining safe plant and equipment, and ensuring that the use and handling of substances is carried out safely.

Process Safety

CPEL applies the principles of Process Safety Management to maintain the integrity of our operations.

We ensure that risks associated with major accident hazards, arising out of our offshore operations, are identified and controlled.

Environmental Management

CPEL is committed to integrating responsible environmental management into all aspects of its operations.

Our EMS provides the framework for setting and reviewing environmental targets and objectives, and the process by which the EMS is documented, implemented and maintained. Our actions will support the prevention of pollution and the reduction of waste generation.

Energy and Emissions Management

CPEL measures, monitors and controls our energy consuming and emissions producing practices with the aim of creating a net reduction in greenhouse gas emissions, specifically CO₂, methane, N₂O and HFCs.

Our Net Zero business plan aligns with CNOOCs principles of green development and supports the North Sea Transition Deal's Supply Decarbonisation targets on the UKs roadmap to emissions neutrality by 2050.

Social Responsibility

We are committed to behaving ethically and contributing to economic development while improving the quality of life of the workforce and their families as well as the local community within the sphere of our activities.

At regular intervals the Board of Directors reviews and revises this policy, as necessary. The Directors of the company each individually and collectively share the commitment and will seek to act as Directors in accordance with the above principles.

Pan, Yiyong
Managing Director UK

ECN-HS-POL-00065
Revision 13.0
September 2023



Asset operations

CNOOC's three UK operated assets:



Buzzard

Buzzard is located approx. 100 kilometres north-east of Aberdeen (Block 20/06a) and produced first oil in 2007.

Buzzard is one of the UK's highest-producing fields, providing safe and secure energy for the UK.



Golden Eagle

The Golden Eagle platform is located approx. 111 kilometres north-east of Aberdeen (Block 20/1S) and produced first oil in 2014.

Golden Eagle has an exceptional safety record spanning its operational life, achieving more than nine years without a lost-time injury in 2023.



Scott

The Scott asset is located approx. 185 kilometres north-east of Aberdeen (Block 15/22) and commenced production in 1993.

The Scott, Telford and Rochelle fields are tied into the platform. The Scott and Telford fields continue to produce through Scott, while the Rochelle field reached COP in 2019.

Drilling operations

CNOOC's contracted drilling rigs in the UK:



COSL Innovator

The COSL Innovator is a semi-submersible drilling rig which has been supporting drilling campaigns at the Buzzard field since May 2023.



Shelf Drilling Fortress

The Shelf Drilling Fortress is a jack-up drilling rig which has been supporting drilling campaigns at the Golden Eagle field since August 2023.

Atmospheric emissions

Production GHG emissions as CO2 equivalent

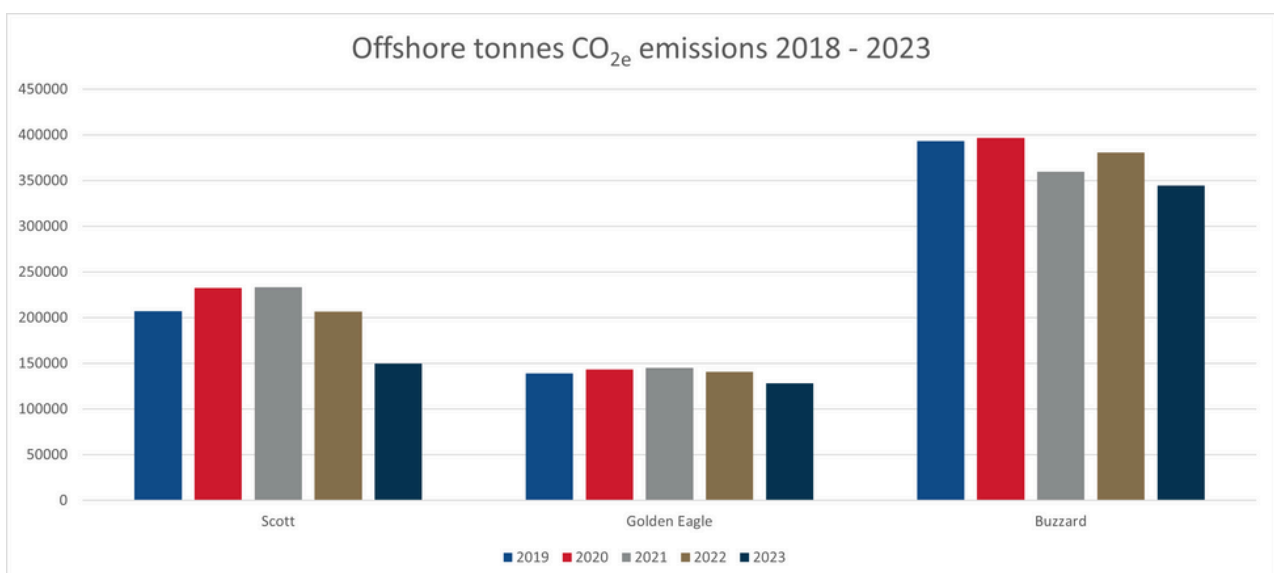
CO₂e emissions from Flaring, Fuel Consumption, Base Venting, Cold Flaring, Fugitive Emissions and F Gas decreased from 728,692 tonnes in 2022 to 622,331.5 in 2023.

There was an overall decrease of 21.3% on the 2018 baseline emissions from the three offshore installations. This is good progress on the roadmap to reaching the NSTD target of a 10% reduction on the 2018 baseline by 2025.

2023 power generation related CO₂ emissions were down 10.8% on the 2018 baseline. This is due to long TAR lengths in 2023 coupled with power generation downtime on the Scott asset.

Flaring related CO₂ emissions have reduced by 45.2% compared to 2018 levels as a result of the asset teams' significant efforts to implement good flaring management practices. 2023's performance also benefited from a Buzzard ERAP opportunity that was implemented in 2022 which rerouted flash gas away from the flare system and back into the process for utilisation.

CO₂e emissions from production activities



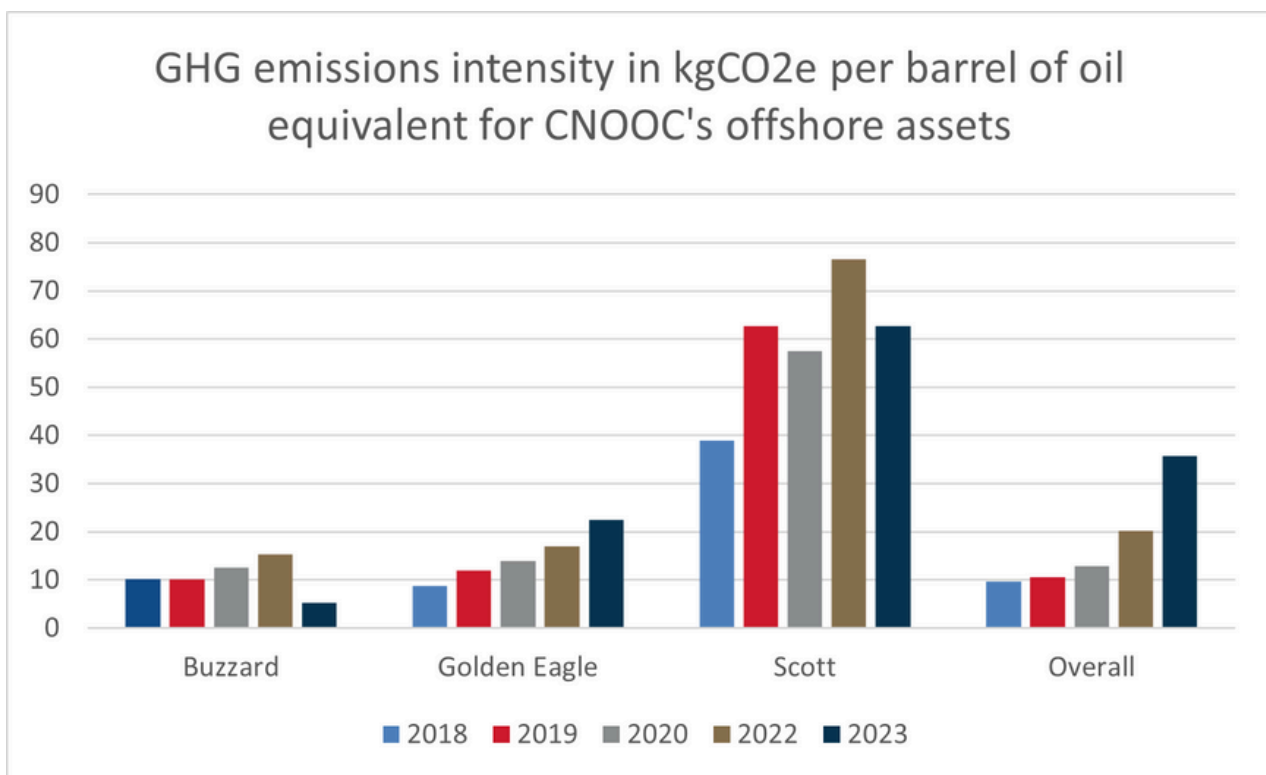
GHG emissions from CNOOC's offshore installations by tonnes CO₂ equivalent, between 2018 and 2023.

Emissions intensity is a productivity and efficiency ratio which expresses the GHG impact in kilograms of CO₂e emitted divided by the production output (in barrels of oil equivalent). A decreasing intensity performance will reflect a positive and more efficient performance improvement in terms of less GHG emitted per unit of production.

Overall, there is an increasing trend in emissions intensity, despite reducing actual emissions. This is expected for mature assets as production declines, but power requirements remain relatively stable. This metric is commonly used to compare performance between assets, though doing this can be misleading and must be put in context of the asset, the basin and the product type.

Individual installation CO₂ emissions

CNOOC's ERAPs were first published in 2022, identifying credible opportunities to reduce GHG emissions. They were updated in 2023, validating implemented activities and with the addition of new opportunities to reduce emissions.



GHG emissions intensity in kgCO₂e per barrel of oil equivalent for CNOOC's offshore assets.

Oil in produced water discharge (permitted discharges)

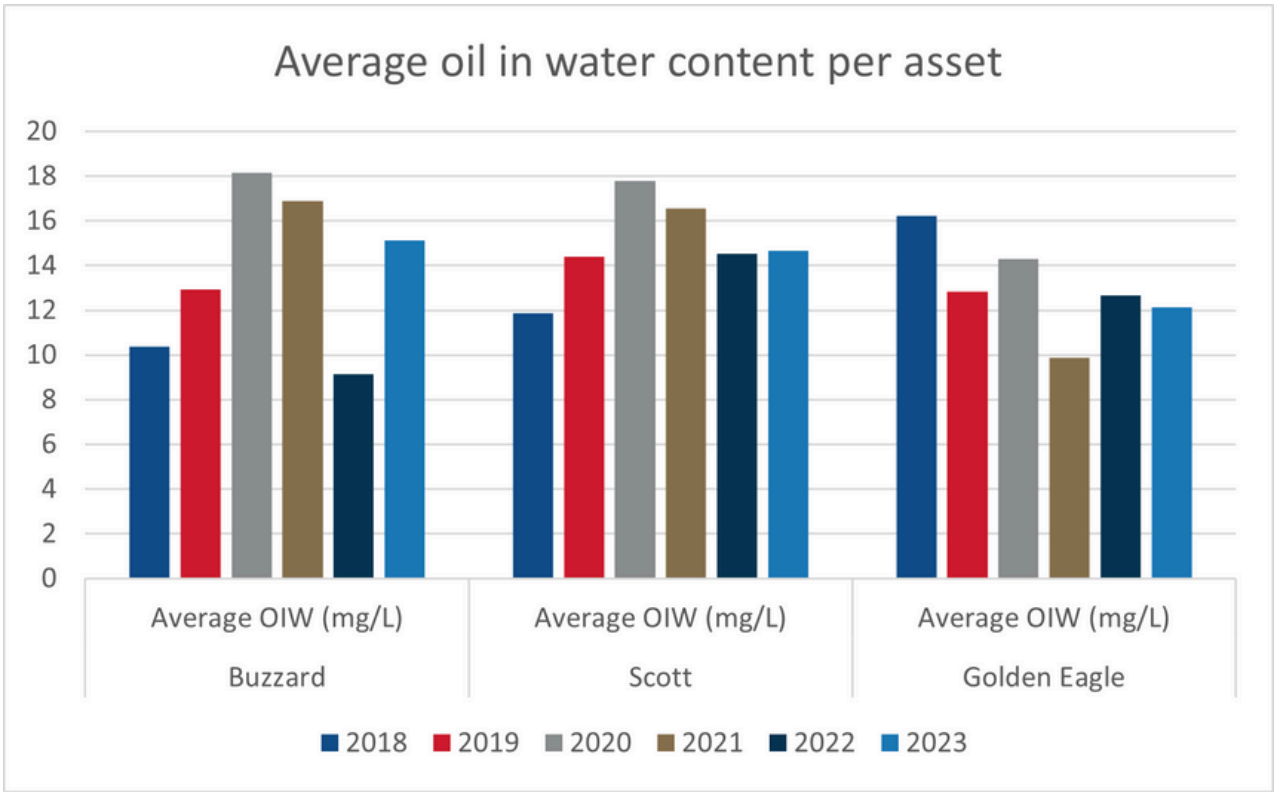
The mass of oil discharged decreased from 71.5 tonnes in 2022 to 55.5 tonnes in 2023. Some of this decrease may be attributed by a reduction in produced water discharge from 5,071,556 m³ in 2022 to 3,789,627 m³ in 2023.

Total water volume discharged increased on Buzzard and decreased on Scott and Golden Eagle in 2023.

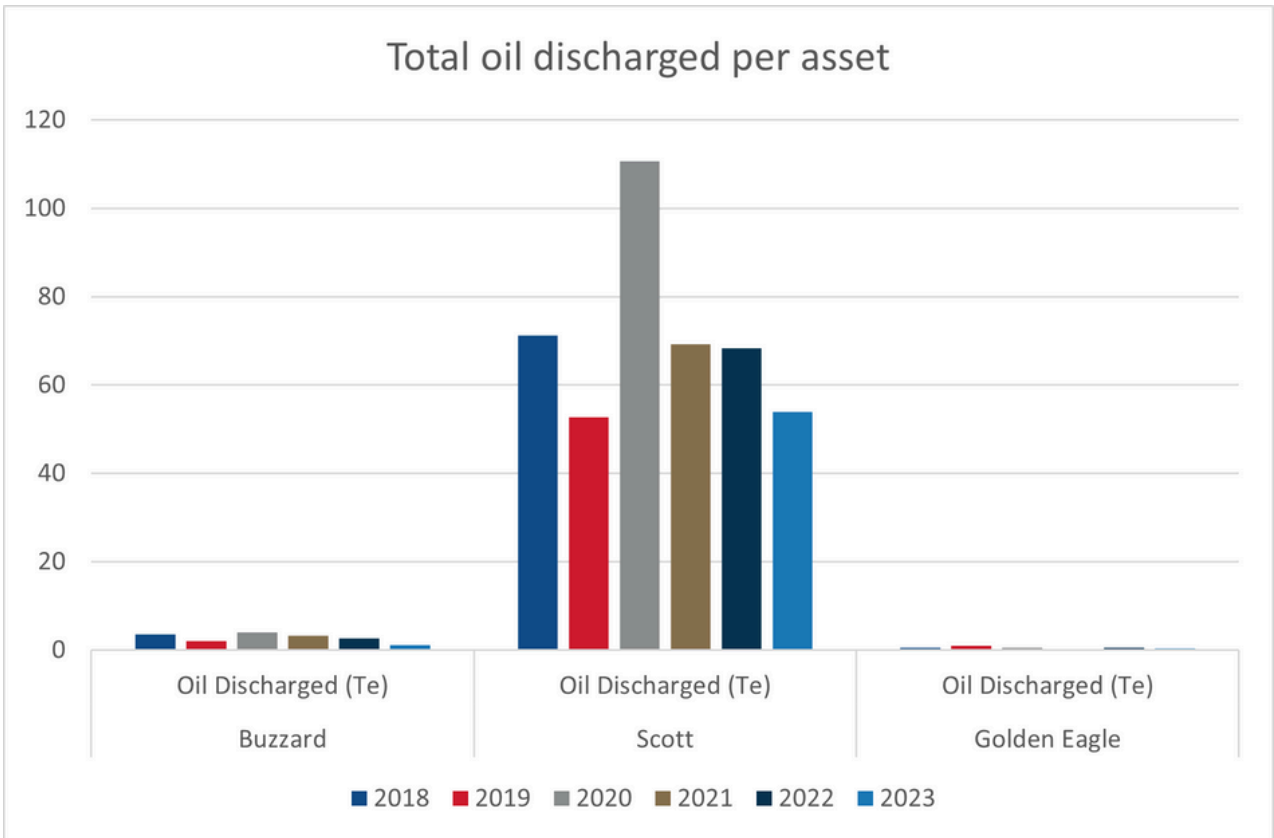
- In 2022, the Buzzard platform had level control valve issues on the de-gasser. This was fixed and there were no issues experienced thereafter, giving a lower produced water discharge over 2023.
- On the Scott Platform there were lower production volumes in 2023 due to reservoir decline and platform being shutdown for various periods. Telford uptime was also less, which contributes to a lower OiW concentration.
- In 2023, Golden Eagle focused on safe and stable operations resulting in high water injection efficiency and therefore less requirement to overboard produced water.

Water re-injection increased on Buzzard and Golden Eagle in line with the continued maturing of the fields to maintain reservoir pressure. Produced water re-injection is an important process as it maintains reservoir pressure for improved production and reduces overboard discharge of oil and chemicals in produced water.

This is especially noticeable on Buzzard and Golden Eagle where produced water re-injection uptime is high resulting in very low produced water discharges. The Scott platform does not have produced water re-injection capability.



Oil in produced water discharged per asset.



Total oil discharged per asset.

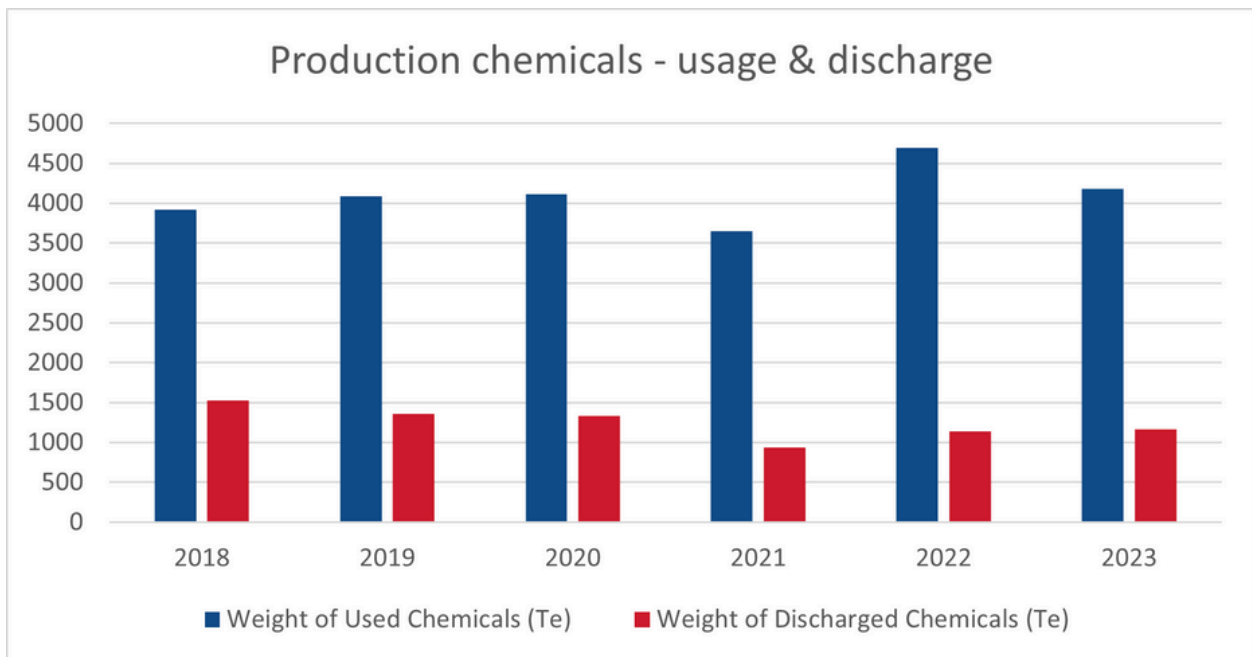
Chemicals

Production chemicals

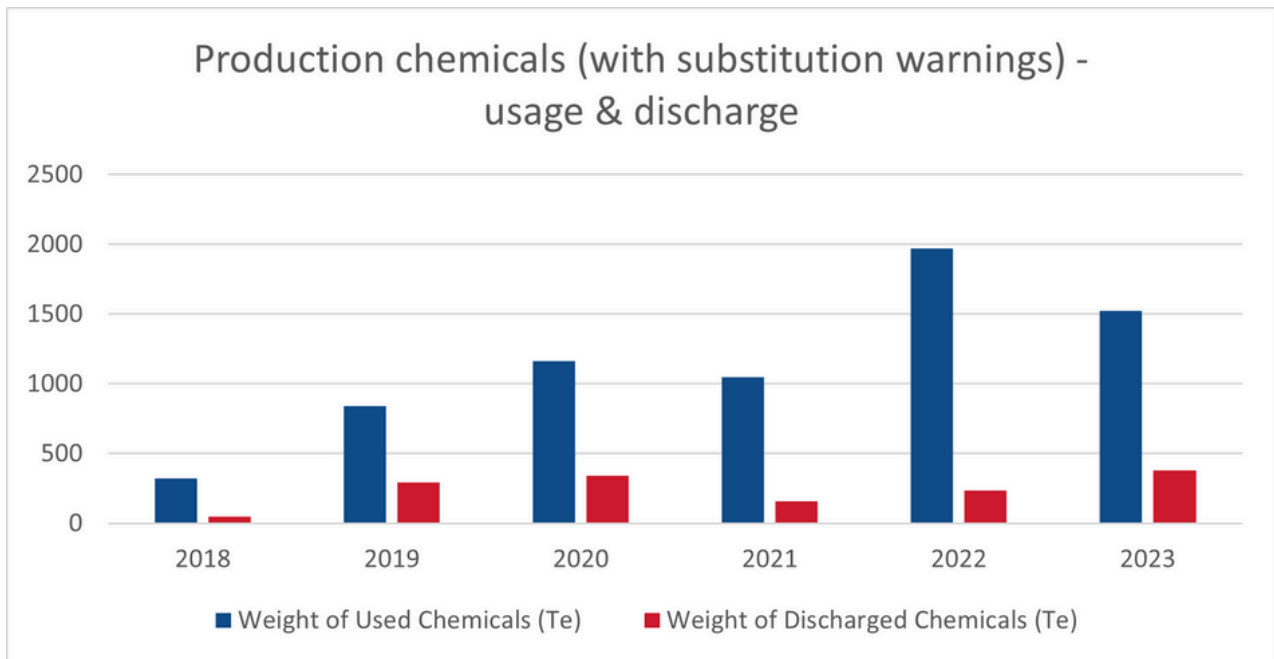
The total chemicals used decreased from 4,697 tonnes in 2022 to 4,177 tonnes in 2023.

Chemicals which are hazardous to the marine environment are subject to substitution (SUB) warnings under the Harmonized Mandatory Control Scheme (HMCS). Usage of production chemicals with SUB warnings increased in 2023 compared to 2022. This was due to Oceanic HW540 E gaining a substitution warning on the Cefas list issued 02 May 2023. Oceanic HW540 E was selected for use when the product was substitution free and has been extensively optimised for use on Scott. The component responsible for the substitution warning is the leak tracer dye. Rapid detection and repair of leaks minimises their environmental impact. The benefit of a fluorescent leak tracing dye outweighs the environmental impact of very low quantities of dye discharged per day.

At this time, no alternatives to the substitution chemicals still being used by CNOOC have been sourced. CNOOC will continue to explore more environmentally friendly chemicals to replace these sub warning chemicals.



Production chemical usage.



Production chemical usage with substitution warnings.

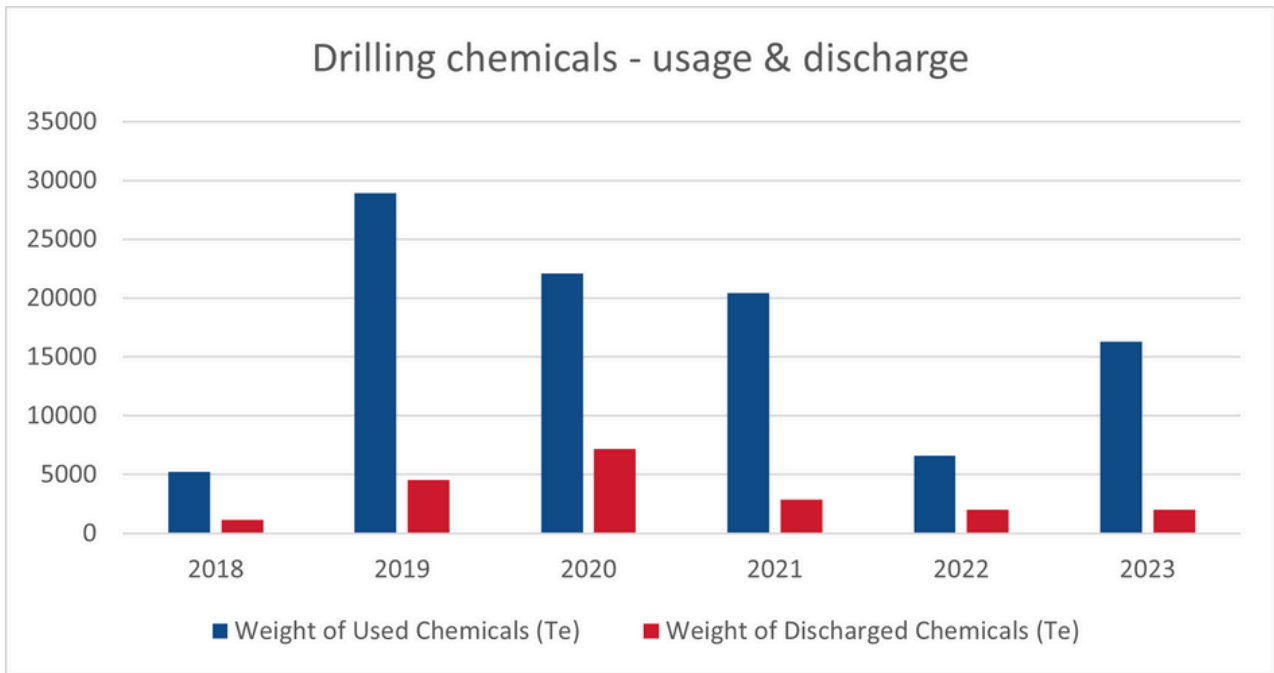
Drilling - including well intervention and pipeline chemicals

Chemical use increased significantly from 6,580 tonnes in 2022 to 16,290 tonnes in 2023. This is due to an increase in drilling activity since 2022.

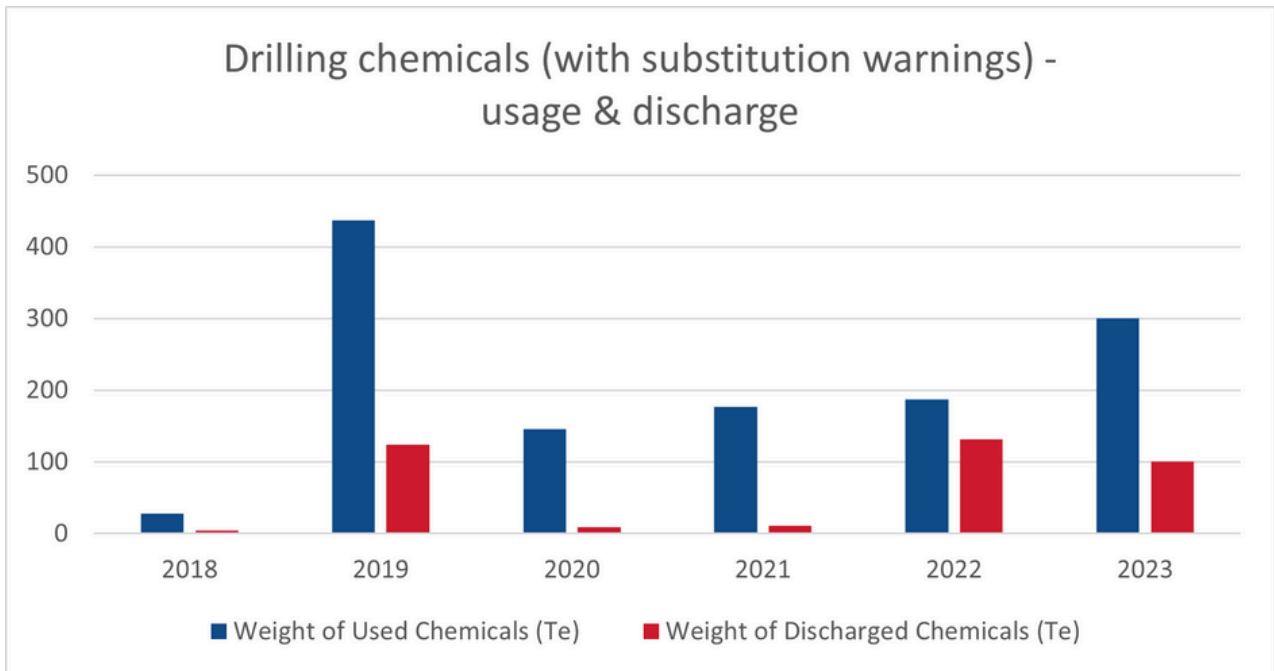
Discharge weight increased slightly but not significantly. This is due to an increase in drilling, activity since 2022.

The use of SUB labelled chemicals for drilling increased from 186 tonnes in 2022 to approx. 300 tonnes in 2023. Overall discharge of chemicals with SUB warnings decreased from 131 tonnes in 2022 to 100 tonnes in 2023.

CNOOC continues to make efforts to avoid discharge of SUB warning chemicals and is committed to seeking alternatives for these chemicals wherever suitable options are available.



Drilling chemical usage.



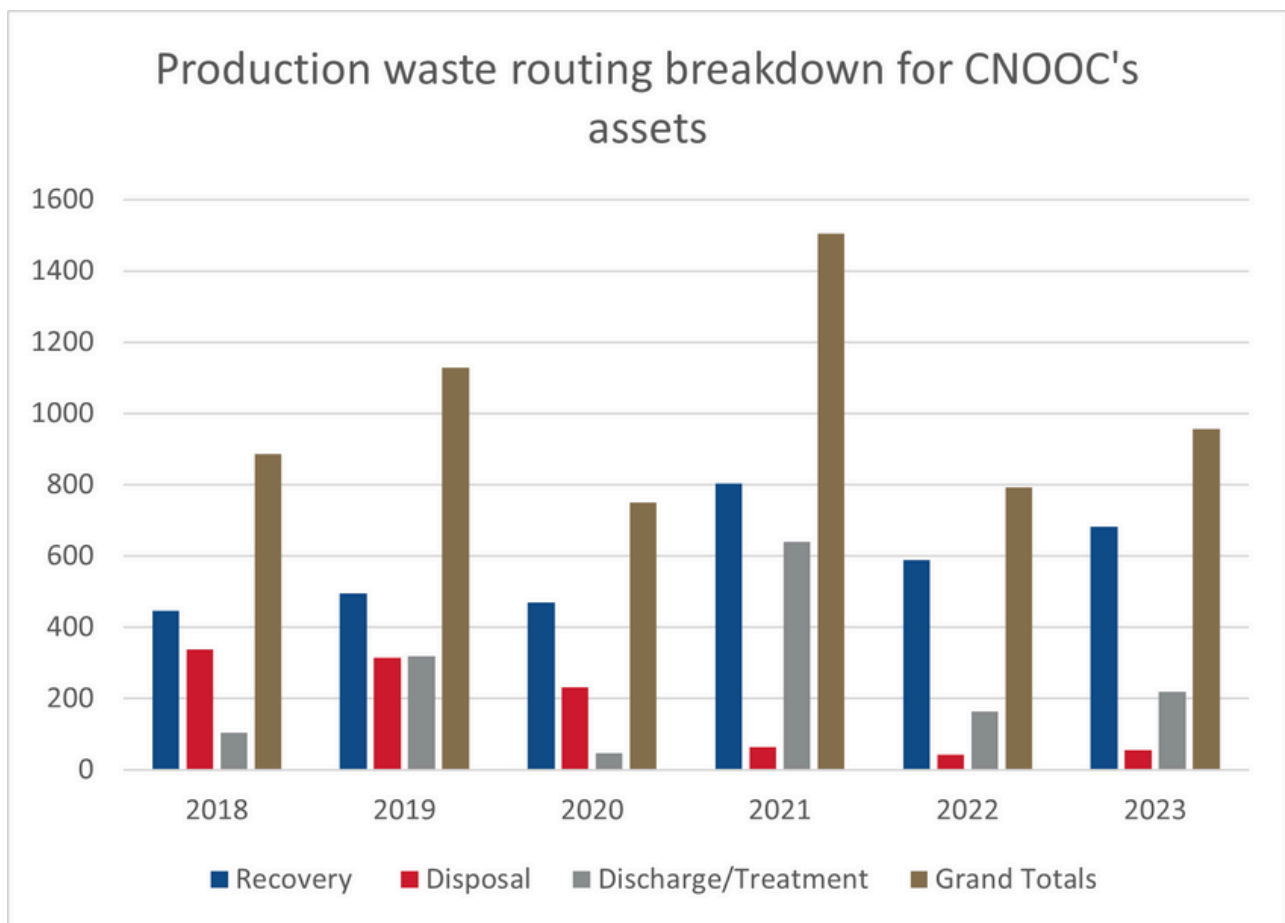
Drilling chemicals usage with substitution warnings.

Waste

Production waste

In 2023, 956 tonnes of waste was generated across all installations, which is an increase from the 793 tonnes of waste compared with 2022. An SRP vessel changeout scope and a longer TAR duration in 2023 on the Buzzard Platform generated increased volumes of waste accounting for the overall increase.

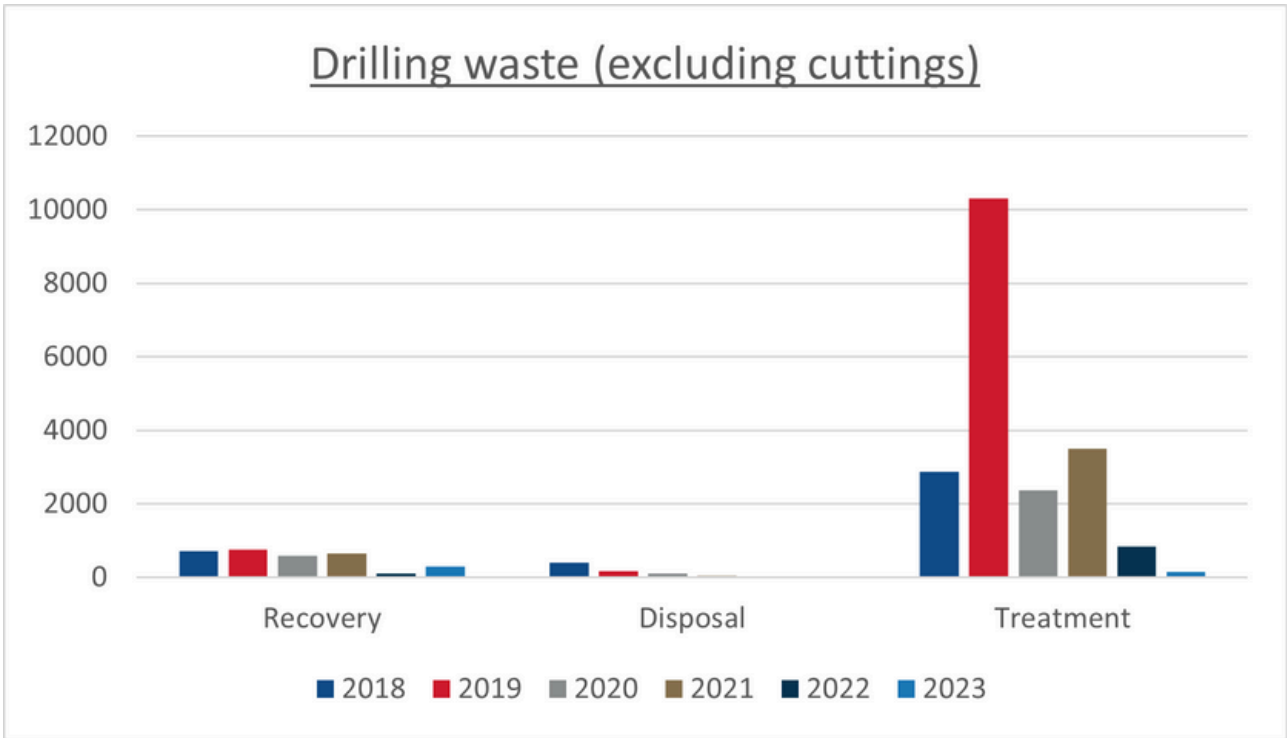
With a Zero Waste to Landfill focus across CNOOC's UK operations, low levels of waste are sent to landfill with alternative methods and routes being utilised where possible.



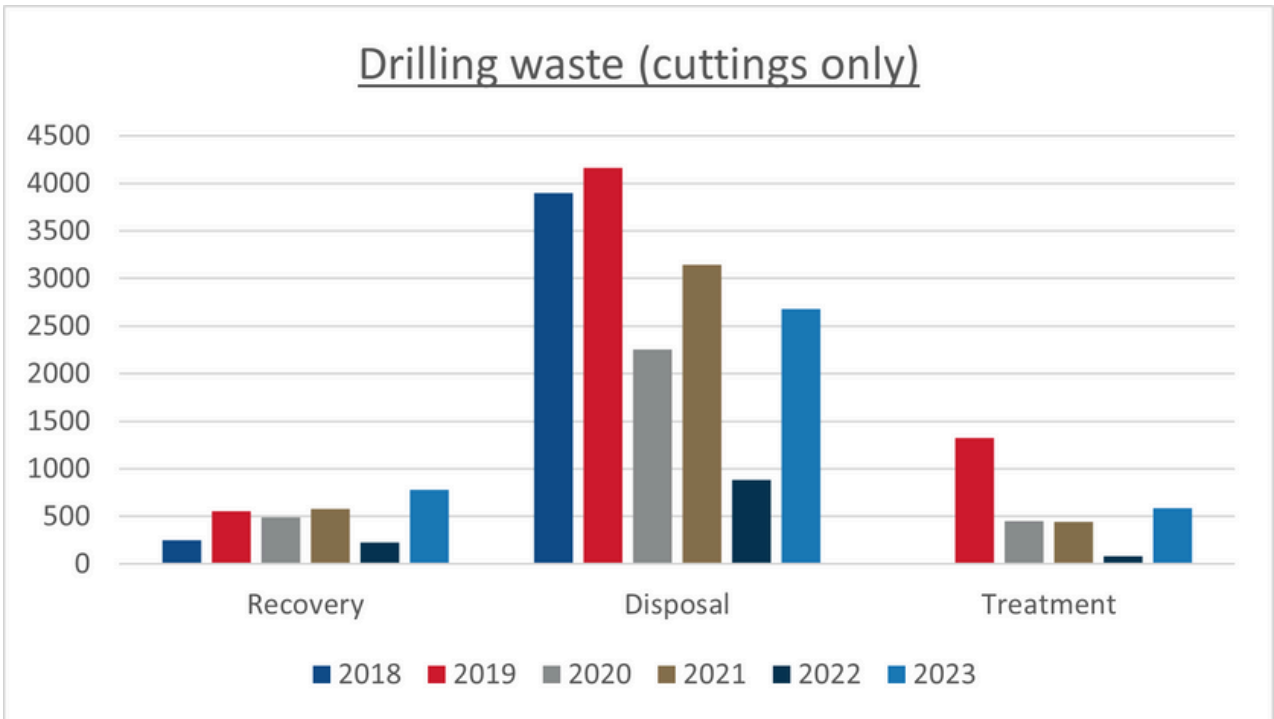
Production waste disposal routes – by year.

Drilling waste

Drilling waste generated (excluding cuttings) in 2023 was approx. 462 tonnes, compared with approx. 963 tonnes in 2022. The decrease was due to the use of a slops treatment unit resulting in the water discharged to sea. Waste cuttings increased due to an increase in drilling activities. However, cuttings returned to shore were kept to a minimum due to the use of a thermo-mechanical cuttings cleaner.



Drilling waste generated (excluding cuttings).



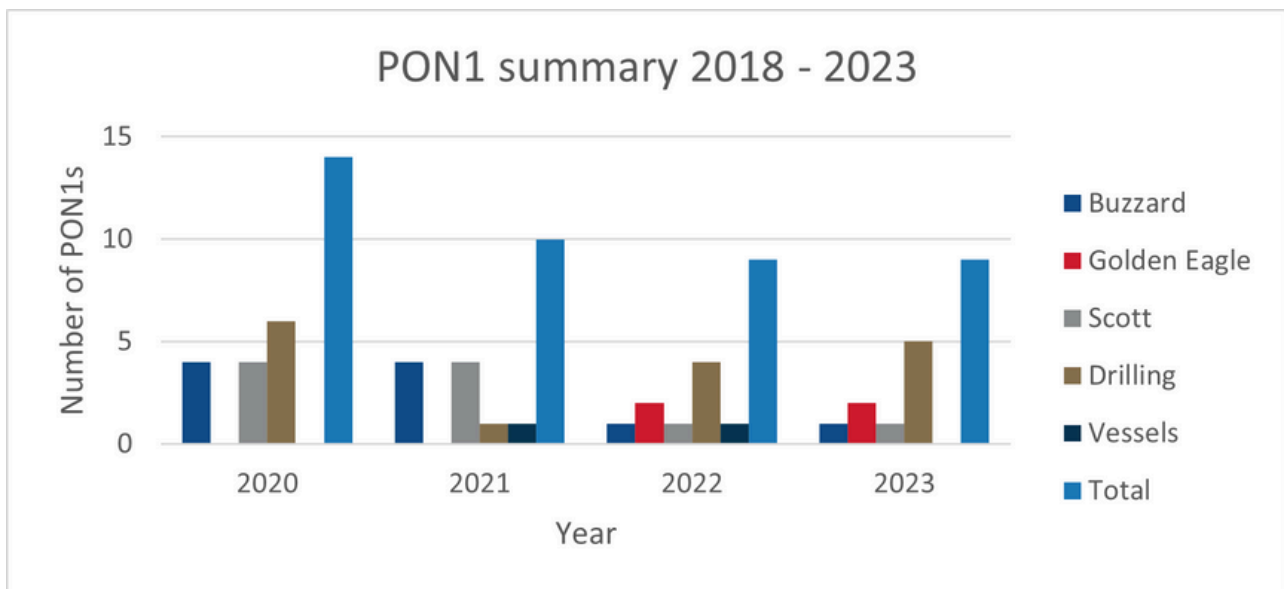
Drill cuttings waste generated.

Compliance

2023 unplanned releases

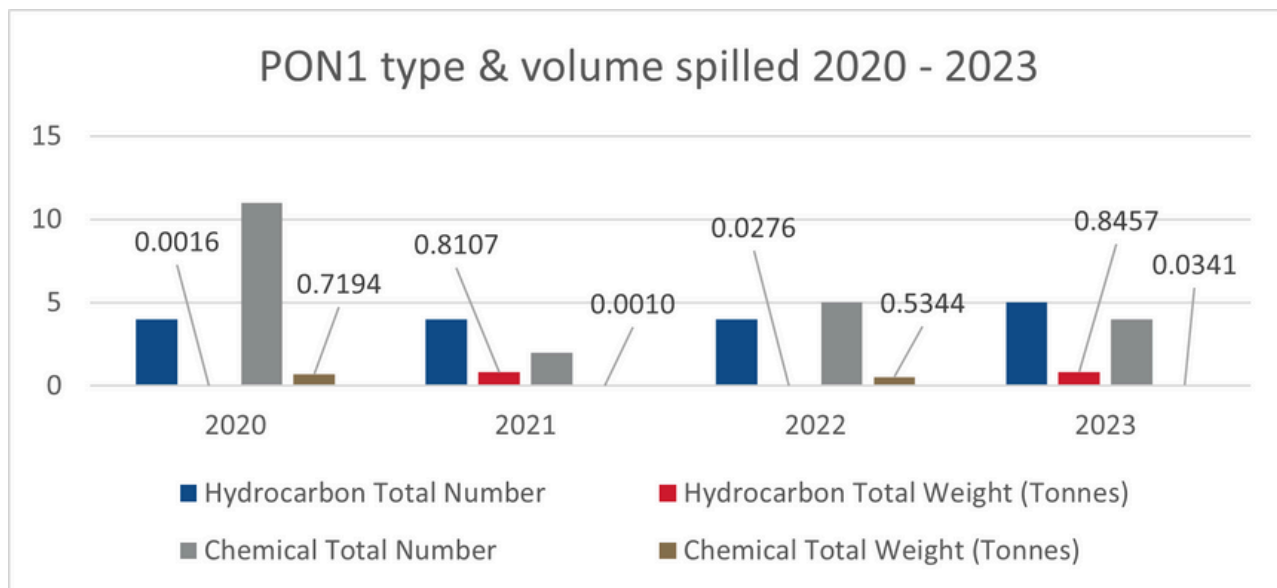
During 2023, there were nine unplanned releases, the same number as 2022. (This figure does not include ongoing PON1s.) This is the second lowest recorded number of PON1 reports for CNOOC's UK operations.

Five of the releases were from drilling activities. Scott had one release, Golden Eagle had two releases, and Buzzard had one release.



Individual installations - PON1 summary.

The breakdown of PON1s that occurred in 2023 shows that two were hydrocarbon related and seven were chemical related. There was a total of 0.881 tonnes spilled in 2023. Hydrocarbon releases accounted for 0.845 tonnes while chemical spill accounted for 0.036 tonnes in total.



2023 regulatory non-compliances

In addition to reporting unplanned oil and chemical spills associated with offshore activities, CNOOC is also required to submit notification to the regulator in the event of a non-compliance with the current legislative regime.

Four non-compliances incurred during 2023:

- The first was related to the COSL Innovator due to an incorrect description of the non-hazardous drains within the oil discharge permit. This was detected by CNOOC during a routine rig visit.
- The second was a produced water excursion on the Buzzard platform, releasing a total of 0.0002 tonnes of oil.
- The third was discovered by CNOOC during an audit where a non-permit rig wash was found on board the rig.
- The final non-compliance was a chemical non-compliance due to a non-approved chemical being used during a well intervention.

Environmental objectives

CNOOC's 2023 environmental goals and objectives were achieved. A management review concluded the Environmental Management System is effective at achieving continuous improvement in environmental performance in line with these goals and objectives.

Environmental objectives 2024

CNOOC's environmental objectives are to:

- Manage and minimise emissions from power generation, flaring, and unburned hydrocarbons.
- Optimise energy intensity in line with newly established Energy Performance Indicators (EnPIs).
- Manage and minimise discharges to sea of oil and hazardous chemicals.
- Manage and minimise waste generation within the supply chain to achieve zero waste to landfill.
- Prevent and mitigate significant environmental unplanned/accidental discharges to sea and air.
- Promote and improve environmental awareness and engagement amongst the workforce.

2024 environmental targets are:

- Maintain a trajectory towards a target of 10% reduction on 2018 baseline emissions by 2025.
- Zero waste to landfill – One or more months < 1 tonne waste to landfill.
- Zero significant (enforcement action level) spills to sea.
- Zero unplanned production permit variations.
- Monthly monitoring of EnPIs and establishment of benchmarks.

These objectives and targets are supported by an Environmental Management System foundation of engagement, compliance, and continuous improvement.

